

REMARKS

Initially, Applicants would like to express appreciation to the Examiner for the detailed Final Official Action provided.

Upon entry of the above amendment, claims 1, 7, and 14-17 will have been amended; and claims 8 and 9 will have been canceled. Accordingly, claims 1-7 and 10-17 are currently pending. Applicants respectfully request reconsideration of the outstanding rejections and allowance of claims 1-7 and 10-17 in the present application. Such action is respectfully requested and is now believed to be appropriate and proper.

Claims 1, 2, 4-7, and 13-17 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over LIPKOVER (U.S. Patent No. 5,421,816) in view of SHIMADA (U.S. Patent No. 5,267,985).

Although Applicants do not necessarily agree with the Examiner's rejection of the claims on this ground, nevertheless, Applicants have amended independent claims 1, 7, and 14-17 to clearly obviate the above noted ground of rejection in order to expedite prosecution of the present application. In this regard, Applicants note that LIPKOVER fails to show each and every element recited in the amended claims.

In particular, claim 1, as amended, sets forth an ultrasonic percutaneous penetration device including, inter alia, an irradiation unit including a first ultrasonic transducer and a second ultrasonic transducer; and a control unit that controls irradiation conditions of the irradiation unit; "wherein the control unit controls the frequency of the ultrasonic waves to a frequency within a range from 3 to 7 MHz; and wherein the active ingredient is at least one active ingredient selected from the group consisting of vitamin C, vitamin C derivatives, kojic acid, glucoside, glutathione, kiwifruit extract, rose fruit extract, arbutin and acerola extract". Claim 7,

as amended, sets forth an ultrasonic percutaneous penetration kit including, inter alia, a medicine containing an active ingredient; an irradiation unit including a first ultrasonic transducer and a second ultrasonic transducer; and a control unit; “wherein the control unit controls the frequency of the ultrasonic waves to a frequency within a range from 3 to 7 MHz; and wherein the active ingredient is at least one active ingredient selected from the group consisting of vitamin C, vitamin C derivatives, kojic acid, glucoside, glutathione, kiwifruit extract, rose fruit extract, arbutin and acerola extract”. Claims 14-17, as amended, each set forth an ultrasonic percutaneous penetration method including, inter alia, contacting a skin surface with a medicine, and applying ultrasonic waves, providing an irradiation unit including a first transducer and a second ultrasonic transducer; and providing a control unit; “wherein the control unit controls the frequency of the ultrasonic waves to a frequency within a range from 3 to 7 MHz; and wherein the active ingredient is at least one active ingredient selected from the group consisting of vitamin C, vitamin C derivatives, kojic acid, glucoside, glutathione, kiwifruit extract, rose fruit extract, arbutin and acerola extract”.

This amendment is fully supported by the specification, including the claims and drawings, and no prohibited new matter has been added. Independent claims 1, 7, and 14-17 have been amended to include the subject matter of dependent claims 8 and 9.

As recognized by the Examiner in Paragraphs 5 and 6 of the Final Official Action dated September 19, 1008, LIPKOVER and SHIMADA et al. fail to teach or suggest ultrasonic waves in a frequency range of 3 to 7 MHz, and also fail to teach or suggest the active ingredient selected from the group consisting of vitamin C, vitamin C derivatives, kojic acid, glucoside, glutathione, kiwifruit extract, rose fruit extract, arbutin and acerola extract, as set forth in amended claims 1, 7, and 14-17.

Therefore, the SHIMADA et al. patent fails to cure the deficiencies of the LIPKOVER patent, and even assuming, arguendo, that the teachings of LIPKOVER and SHIMADA et al. have been properly combined, Applicants' claimed ultrasonic penetration device, ultrasonic penetration kit, and ultrasonic penetration method would not have resulted from the combined teachings thereof.

Accordingly, the rejection of claim 1, 7, and 14-17 under 35 U.S.C. § 103(a) over LIPKOVER in view of SHIMADA et al. is improper for all the above reasons and withdrawal thereof is respectfully requested.

Further, Applicants' claimed invention provides that the control unit controls the frequency of the ultrasonic waves to a frequency within a range from 3 to 7 MHz. The ultrasonic wave frequency within the range of 3 to 7 MHz allows the medicine to effectively penetrate a target in a shallow portion from the skin surface. See particularly page 10 of Applicants' specification. Accordingly, the ultrasonic frequency range of 3 to 7 MHz of Applicant's claimed invention provides distinct advantages over the prior art.

However, in contrast, the KOST et al. patent teaches the use of frequencies of between 20 kHz and 10 MHz to enhance transdermal transfer of molecules. Clearly, KOST et al. teaches neither the claimed frequency range of 3 to 7 MHz nor the resulting advantage of effective target penetration, as in Applicants' invention.

Further, Applicants' claimed invention also provides that the active ingredient is selected from the group consisting of vitamin C, vitamin C derivatives, kojic acid, glucoside, glutathione, kiwifruit extract, rose fruit extract, arbutin and acerola extract. The particular active ingredient to be contained in the medicine may be selected appropriately depending on the desired effect,

such as, for example, whitening effects, wrinkle reduction effects, slimming effects, or trichophytosis treatment effects. See particularly pages 12-13 of Applicant's specification.

However, in contrast, the HIDAKA et al. patent teaches the use of glutathione transferred transdermally for use as an antidote. However, the HIDAKA et al. patent fails to teach or suggest providing ultrasonic waves to enhance the transdermal transfer of the glutathione. HIDAKA et al. also fails to teach or suggest selecting an active ingredient from the group consisting of vitamin C, vitamin C derivatives, kojic acid, glucoside, glutathione, kiwifruit extract, rose fruit extract, arbutin and acerola extract. Moreover, HIDAKA et al. also fails to teach or suggest selecting an active ingredient to obtain a desired effect of whitening, wrinkle reduction, slimming, or trichophytosis treatment. Clearly, then, HIDAKA et al. teaches neither the claimed active ingredient selected from the group consisting of vitamin C, vitamin C derivatives, kojic acid, glucoside, glutathione, kiwifruit extract, rose fruit extract, arbutin and acerola extract; nor the resulting advantages thereof, as in Applicants' invention.

Thus, in view of the above noted amendments and remarks, Applicants respectfully submit that LIPKOVER, SHIMADA et al., KOST et al., and HIDAKA et al. fail to teach or suggest the subject matter claimed in amended claims 1, 7, and 14-17, and even assuming, arguendo, that the teachings of LIPKOVER, SHIMADA et al., KOST et al., and HIDAKA et al. could have been properly combined, Applicants' claimed ultrasonic penetration device, ultrasonic penetration kit, and ultrasonic penetration method would not have resulted from the combined teachings thereof.

Further, there is nothing in the cited prior art that would lead one of ordinary skill in the art to make a modification as suggested by the Examiner in the rejection of claim 9 under 35 U.S.C. § 103(a) over LIPKOVER in view SHIMADA et al., KOST et al., and HIDAKA et al.

Thus, the only reason to combine the teachings of LIPKOVER, SHIMADA et al., KOST et al., and HIDAKA et al. would result from a review of Applicants' disclosure and the application of impermissible hindsight. Accordingly, a rejection of claims 1, 7, and 14-17 under 35 U.S.C. § 103(a) over LIPKOVER in view SHIMADA et al., KOST et al., and HIDAKA et al. would be improper for at least all the above reasons.

Applicants submit that dependent claims 2-6 and 10-13, which are at least patentable due to their dependency from claims 1 and 7 for the reasons noted above, recite additional features of the invention and are also separately patentable over the prior art of record based on the additionally recited features.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection, and an early indication of the allowance of claims 1-7 and 10-17.

SUMMARY AND CONCLUSION

In view of the foregoing, it is submitted that the present amendment is proper for entry since it merely combines dependent claims 8 and 9 with independent claims 1, 7, and 14-17, which is an issue about which Applicants have already presented arguments, and it is also submitted that none of the references of record, considered alone or in any proper combination thereof, anticipate or render obvious Applicants' invention as recited in claims 1-7 and 10-17. The applied references of record have been discussed and distinguished, while significant claimed features of the present invention have been pointed out.


Accordingly, consideration of the present amendment, reconsideration of the outstanding Final Official Action, and allowance of the present amendment and all of the claims therein are respectfully requested and now believed to be appropriate.

Applicants have made a sincere effort to place the present application in condition for allowance and believe that they have now done so.

Any amendments to the claims which have been made in this amendment, which do not narrow the scope of the claims, and which have not been specifically noted to overcome a rejection based upon the prior art, should be considered cosmetic in nature, and to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

Should the Examiner have any questions, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully Submitted,
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A handwritten signature in dark ink, appearing to read "Linda J. Hodge", is written over a horizontal line.

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